NAME

mgf2rad - convert Materials and Geometry Format file to RADIANCE description

SYNOPSIS

mgf2rad [**−m matfile**][**−e mult**][**−g dist**] [**input ..**]

DESCRIPTION

Mgf2rad converts one or more Materials and Geometry Format (MGF) files to a RADIANCE scene description. By definition, all output dimensions are in meters. The material names and properties for the surfaces will be those assigned in MGF. Any materials not defined in MGF will result in an error during translation. Light sources are described inline as IES luminaire files, and *mgf2rad* calls the program *ies2rad(1)* to translate these files. If an IES file in turn contains an MGF description of the local fixture geometry, this may result in a recursive call to *mgf2rad,* which is normal and should be transparent. The only side-effect of this additional translation is the appearance of other RADIANCE scene and data files produced automatically by *ies2rad.*

The −*m* option may be used to put all the translated materials into a separate RADIANCE file. This is not always advisable, as any given material name may be reused at different points in the MGF description, and writing them to a separate file loses the contextual association between materials and surfaces. As long as unique material names are used throughout the MGF description and material properties are not redefined, there will be no problem. Note that this is the only way to get all the translated materials into a single file, since no output is produced for unreferenced materials; i.e. translating just the MGF materials does not work.

The −*e* option may be used to multiply all the emission values by the given *mult* factor. The −*g* option may be used to establish a glow distance (in meters) for all emitting surfaces. These two options are employed principally by *ies2rad,* and are not generally useful to most users.

EXAMPLE

To translate two MGF files into one RADIANCE materials file and one geometry file:

    mgf2rad −m materials.rad building1.mgf building2.mgf > building1+2.rad

To create an octree directly from two MGF files and one RADIANCE file:

    oconv '\!mgf2rad materials.mgf scene.mgf' source.rad > scene.oct

FILES

tmesh.cal	Used to smooth polygonal geometry
*.rad	RADIANCE source descriptions created by ies2rad
*.dat	RADIANCE source data created by ies2rad
source.cal	Used for IES source coordinates

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SEE ALSO

ies2rad(1), mgf2meta(1), obj2rad(1), oconv(1), rad2mgf(1), xform(1)

MGF web site "http://radsite.lbl.gov/mgf/HOME.html"